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ABSTRACT

Seven children aged 21 to 33 months were taped while they interacted with adults. Transcripts of each session were examined for utterances containing "and," "because," "but," "then," and "so." "And" was the first conjunction produced by all children, followed by "because." "So" was the last conjunction produced, and was used to mean both "in order that" and "therefore." These results support previous findings. The second major finding of the study was that many aspects of the order of acquisition could be explained or better understood when discourse usage was taken into account. Thus, for example, each conjunction exhibited a discourse role insofar as it was, initially at least, primarily a connector within the child's own speech or with an adult utterance. This finding illustrates the complexity of factors--syntactic, semantic, and pragmatic--operating in the acquisition of one system in language. (JB)

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A SYNTACTIC, SEMANTIC, AND PRAGMATIC ANALYSIS OF CONJUNCTION

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Most recent studies of the acquisition of conjunction have focused on the semantic content of connected sentences, rather than on the conjunctive forms themselves. For example, the studies conducted by Bloom and her students (Bloom, Lahey, Hood, Lifter, & Fiess, 1978; Fiess, Capatides, & Bloom, 1979; Hood, Lahey, Lifter, & Bloom, 1976) analyzed conjoined clauses in terms of whether a new meaning resulted when two events were first conjoined, as in "That's a car and that's a truck," and new meanings, such as causality and antithesis, were expressed before intraevent or subordinate relationships.

Bloom et al. (1978), as well as Clancy, Jacobsen, and Silva (1976) have identified four general types of semantic relationships expressed in children's early conjoined utterances: (1) Additive, involving the cooccurrence of two independent events and/or states; (2) temporal, involving a dependency between events which indicates sequentiality or simultaneity; (3) causal, involving a dependency which is most often intentional or motivational; and (4) adversative, involving a contrastive relationship. They found that children expressed coordinative meanings in the order of addition, temporality, causality, and adversativity. In addition, all of the meaning relationships between clauses were first expressed through the juxtaposition of two related sentences, and only later were the various lexical forms available used (see also Limber, 1973).

Focusing on the meaning relationships, rather than on the linguistic forms, permits the observation that, for example, antithesis, as well as coordination, emerges early (Werner & Kaplan, 1963), as the child rejects an object or state of affairs, while simultaneously voicing a preference for another. The conjunction which makes that connection explicit, however, is acquired a good deal earlier for coordination. What such a focus does not address is the child's notion of the different meanings and uses of the linguistic forms themselves.

The theoretical assumptions of an approach tracing the development of the expression of conceptual relationships are that the child has some semantic notion in mind and, wanting to express it, seizes on the linguistic means to do so. At the same time, however, it is also equally possible that the child discovers forms in the language and looks for the meanings they encode. Therefore, the focus of this

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paper will be to trace the acquisition of the specific connectives in terms of developmental changes in both their meaning and usage. This leads to a model for the acquisition of conjunction based on the interaction of these two approaches.

The study was designed in an attempt to answer three questions: (1) What are the conjunctions used by young children and in what order are they learned?; (2) What are the changes in meaning these forms signal?; and (3) How are the different forms used in relation to the speech of others and what are the changes that occur in terms of this cohesion? Thus far, few studies have addressed the question of what the child DOES with conjunction---that is, whether a conjoined sentence is solely of the child's creation---and none have considered changes in the child's ability to use conjunctions to tie utterances to those of a conversational partner or to create extended discourse passages. Bloom et al. (1978) found that 80-90% of the time, children conjoined two of their own utterances, but no evidence has yet been provided to show how this might change over time.

The subjects for the present study were seven, white, middle-class, English-speaking children, 4 girls and 3 boys, ranging in age from 21 to 33 months at the start of taping and 40 to 46 months at the end. Five of the children were audiotaped and two were videotaped. The five that were audiotaped were participants in a study of grammatical development conducted by Susan Ervin-Tripp and Wick Miller. The other two children were participants in a study of family interactions conducted by Susan Ervin-Tripp and David Gordon. The transcripts from the latter study were also used to provide comparisons with the speech of slightly older children---two four-year-old siblings---and adults (in their speech to children). During the taping sessions, the children interacted with both the mother and father and an experimenter/interviewer. For the most part, the language was situated in the everyday settings in which it was being learned.

Transcripts of each session were examined for all utterances containing the five conjunctions and, because, but, then, and so. These utterances were noted, along with all topically-related utterances of both the child and the others present. These five conjunctions were chosen for study because they were produced frequently enough to permit the analysis of the development of their usage in greater depth. Some of the children did, however, use or, though, anyway, and also on occasion.

The criterion for first use of a conjunction was that three utterances contain the conjunction within one session. Once the child had used a conjunction three times, however, any time it was used in another discourse context, it was counted as a first use in that context.

Although the specific semantic analyses were different for each form, the coding of the "discourse environment" in which the conjunctions were embedded was similar for most forms. Three ways in which two clauses could be conjoined were identified and labeled within, across, and other. In within- and across-utterance conjunctions, both of the conjoined clauses were uttered by the same speaker. In a within-utterance conjunction, the child tied two clauses together without any intervening speech:

(1) Child: I wanna go outside and wave.

Across-utterance conjunctions differed from within-utterance ones only in that the child's two clauses were separated by the intervening speech of another conversational participant:

(2) Child: People usually stay at home at their own house on Saturday.
Adult: Yeah, they do.
Child: But you're at your--at our house.

In other-utterance conjunctions, the child only produced the second of the conjoined clauses. The conjunction served to tie the child's utterance to that of another speaker. In other words, the addressee's utterance was used as a "building block" for the child's utterance:

(3) Adult: You hold my hand, okay?
Child: So we won't hurt us on some car.

One additional category, called other-Question (other-Q) utterances, was used in the analyses of because and so. These utterances were direct responses to another speaker's wh-questions. They differed from other-utterances in that the latter were the child's spontaneous constructions while the former were specifically elicited by the other speaker:

(4) Adult: Why don't you want this cookie?
Child: Cause I got two of 'em.

There are two major findings of the study. The first is that it supports previous findings concerning the sequence of acquisition of conjunctive forms and the meaning relationships encoded by them. This sequence is represented in Table 1. And was the first conjunction produced by all the children, 4 to 11 months before any other conjunction. It was also overwhelmingly the most frequent conjunction used. While there was some degree of individual variation in the order of acquisition of the remaining conjunctions, all the children used because before so and all but one produced because as their second conjunction. So was the last conjunction used by most of the children. In fact, only 4 of the 7 ever used it. In general, however, once one conjunction other than and was used, others were ra-

TABLE 1

The age (in months) at which each child began producing each conjunction in the different discourse environments. [KEY: W=Within, A=Across, O=Other, and Q=other-Q. The bottom figure indicates the number of times the child used the conjunction across all samples.]

CHILD	TYPE	AND	BECAUSE	BUT	THEN	SO
Carol	W	25	42	42	37	36
	A	33	42	37	42	--[a]
	O	31	--	37	42	38
	Q		33			36
	#	136	51	27	7	15
David	W	29	40	37	33	--
	A	32	--	33	37	--
	O	32	40	33	37	--
	Q		37			--
	#	128	20	11	26	0
Susan	W	22	29	31	31	35
	A	29	29	42	31	39
	O	29	31	29	29	37
	Q		29			37
	#	138	103	18	31	13
Henry	W	26	33	34	33	33
	A	31	33	41	33	37
	O	32	33	34	37	3[illegible]
	Q		35			39
	#	381	38	19	33	15
Laura	W	28	37	44	--	37
	A	33	39	--	--	39
	O	32	44	34	--	37
	Q		35			39
	#	171	148	41	2	11
Amy	W	--[b]	34	30	34	--
	A	--[b]	35	34	40	--
	O	--[b]	34	34	--	--
	Q		29			--
	#	118	14	29	15	0
Steven	W	--[b]	45	38	38	--
	A	--[b]	46	38	38	--
	O	--[b]	--	38	38	--
	Q		--[b]			--
	#	184	23	18	7	2

a. Never used.

b. Not included because were used in first sample (Steven at 33 mos. and Amy at 28).

pidly added to the child's repertoire.

One question raised by these results is why so is generally so late to appear in comparison with the other conjunctions. The hypothesis of added cognitive complexity must be discarded because the meaning of so is quite similar to that of because. Furthermore, it is not the case that this late acquisition reflects infrequent input. From the adult data available in the tapes, it is apparent that adults used so (in speech to children) more often than they used temporal then and nearly as often as they used because.

One possible explanation is that the child initially perceives no use for so since many of the same events can be represented using either because, and, or to. Because may be used causally instead of so because being multisyllabic, it is more salient (as Clancy, 1974, suggested as an explanation for why anche precedes e in Italian). More plausibly, however, because is so closely tied to why that it subsumes all causal explanations.

Further analysis also revealed that so was used by the children in two ways: to mean in order that (as in "I'm making Joe a candy so he can eat") and therefore (as in "I can't find my shoes so I'm wearing my socks"). Sentences meaning therefore can be rephrased as sentences containing because ("I'm wearing my socks because I can't find my shoes") while the former cannot. In fact, all the children first used so for the previously unexpressed meaning in order that and only two ever used it to mean therefore.

Why so was ever used to mean therefore may have been a result of the conceptual order of the two clauses. In sentences with because, the order of the two clauses is "result" before "reason." It is possible that result-reason is linguistically a more "logical" way to order events; one tends to see a result and then search for the reason or cause. Result before reason also preserves the order of given-new or salience. Consider the following examples:

(5) a. I'm wearing my socks because I can't find my shoes.
b. I can't find my socks so I'm wearing my shoes.

In (5b) the fact that the speaker is wearing socks without shoes should be apparent to the listener and, therefore, given, but the REASON he is just wearing socks is known only to himself and, therefore, constitutes new information. In most cases, when the children did use so to mean therefore, the "result" was the new information:

(6) Child: (playing tea party) It doesn't have anymore coffee in it. So I'll have tea.

or the "reason" was already present in discourse:

(7) Child: What time do I go to bed?
Adult: At seven o'clock.
Child: It's seven o'clock so you can go to bed.

It is more difficult to compare the results of the analyses of the meaning relationships expressed by the conjunctive forms with earlier research; however, the four basic relationships---coordination, sequence, antithesis, and causality---were present. The earliest uses of and did signal purely additive relationships. The other conjunctions were then added to express the more complex coordinative meanings, but only AFTER and was used to indicate those relationships.

There was not, however, a one-to-one correspondance between a form and a specific semantic relationship. In general, an old form, for example and, was first used to reflect a new meaning, e.g., sequentiality, and later a new form, then was added to express that same meaning. In addition, new forms were usually first used to indicate an old meaning and then later were used to express totally new senses or related, but subtly different ones. For example, children tended to use but to denote denial of expectation:

(8) Child: A little girl gave me a piece of chewing gum but my Daddy took it away from me.

only after they had already used it to indicate (seemingly redundant) emphasis:

(9) Adult: Who's gonna eat this worm for lunch?
Child: I'm gonna, but I'm gonna.

and semantic opposition:

(10) Child: Babies don't like doggies but Mommas do.

Also somewhat later to appear was the use of but to establish a pragmatic contrast---that is, to indicate disagreement or unwillingness to comply with another individual's wishes:

(11) Child: I want some salami.
Adult: But Mr. Miller is here. He came to play with you.
Child: But I want some salami.

The second major finding of the study was that many aspects of the order of acquisition could be explained or better understood when discourse usage was taken into account. Conjunctions have more uses than just to indicate the semantic relationship between two clauses. All conjunctions are used to tie utterances to the discourse context; what differs is whether the tie is between two of the speaker's own utterances or whether the utterance is connected to that of another speaker.

The majority of utterances containing and, then, and so were within the child's own utterance and less than 15% connected an utterance to the adult's speech. Furthermore, the earliest uses of the same three conjunctions were almost entirely within-utterance, with other-utterance usages produced later and increasing in frequency with age. Because was primarily produced in response to a wh-question although once it was used spontaneously, it too was initially a within-utterance conjunction.

Only but was first used to tie the child's utterance to another speaker's utterance before it was used within one of the child's own utterances. One possible explanation is purely cognitive: a sentence containing but requires the awareness of a contrasting presupposition. Using it interconversationally entails only the ability to see that one's own representation of an event does not "match" someone else's while using it intraconversationally requires the ability to perceive both representations and the fact that the representations do not agree.

Another possible explanation focuses on the requirements of discourse and the use of each conjunctive form within discourse. And, then, so, and the spontaneous because had few special discourse roles to fill that would have contributed to their being used in other-utterances. And and then were often used to list related events, objects, or actions or to create narrative chains, both of which were likely to occur within one turn or, at the very least, across the turn of another speaker, who "interrupted" with an acknowledgement or prompting question.

The causal conjunctions---because, so, and causal then---were also unlikely to be used to make cohesive ties with another speaker's utterance. In fact, such ties are also rare in adult speech to children. Only in the very last sessions was there evidence that children were making conditional inferences based on another individual's speech.

But, on the other hand, had a number of interspeaker uses. Its early use often reflected the child's wish to be "set apart":

(12) Adult: What are you making?
Child: A bone. For the doggie.
Adult: We don't have a doggie, though.
Child: But I do.

A number of early uses of and expressed the child's wish to be included (eg, And me too), but the large number of other uses made these utterances a very small proportion of the total. But also had special interconversational uses for both the 2-year-olds, the 4-year-olds, and the adults, primarily in opposition sequences where it was commonly used to indicate denial of expectation across speakers. It would seem that while speakers are not as likely to "add" onto what another individual says (using and), they ARE likely to point out contrasts between what someone else says and what they expected.

The question then is how all these pieces---the lexical items themselves, the semantic relationships, the discourse uses---fit together. What I hope I have done is to illustrate the complexity of factors operating in the acquisition of one system in language. In order to understand what the child is doing, in many cases it is necessary to look at the entire linguistic system---syntax, semantics, and pragmatics.

A number of things are happening as children learn to conjoin sentences. First, as Bloom has illustrated, they begin to use surface particles to express the semantic notions originally expressed only by juxtaposition. In Slobin's (1973) and Werner and Kaplan's (1963) terms, children are using new forms to express old functions. Not only are forms "located" to express previously unmarked meanings, but new and different forms are found and used to express concepts already indicated with other forms. For example, children express sequentiality with the connective then after they use and to signal that same meaning.

New forms can also be added to express old functions because of pragmatic constraints---for example, when the child wishes to focus on an element of a situation other than that which the original form would permit, as in the because/so distinctions. It is also possible that the children acquire additional forms to express one conept because they become aware that others are using a novel form and thus "search" for its meaning and use.

In addition, however, as has also been suggested, old forms are used to express new functions. When children first begin to voice complex coordinative meanings, they initially do so through the one surface particle they are already using---and. Old forms are also used to express more subtle differences in meaning. For example, once but has been used to create a relationship of semantic opposition, it can then be used to signal denial of expectation.

One more statement must be added to Slobin's framework, however. Old forms can be used to perform new functions IN DISCOURSE, as well as to express new meanings. The discourse environment analyses for the connectives and, because, then, and so illustrate this concpet well. Once children can use a form to make some logical connection between two clauses, they can then begin to use that same form to create a new type of cohesion---to create "chains" of extended discourse. These forms can then be used to establish the relevance of the child's contribution to a conversation.

REFERENCES

Bloom, L., Lahey, M., Hood, L., Lifter, K., and Fiess, K. Later language development: Acquisition of syntactic connectives and semantic relations in complex sentences. Manuscript, 1978.

Clancy, P. The acquisition of conjunction in Italian. Manuscript, 1974.

Clancy, P., Jacobsen, T., and Silva, M. The acquisition of conjunction: A cross-linguistic study. PRCLD, 1976, 12, 71-80.

Fiess, K., Capatides, J.B., and Bloom, L. The origins of complex sentences. Paper presented at the Biennial Meeting of the Society for Research in Child Development, San Francisco, March, 1979.

Hood, L., Lahey, M., Lifter, K., and Bloom, L. The development of syntactic connectives and the meaning relations they code. Paper presented at the Conference on the Application of Observational/Ethological Methods to the Study of Mental Retardation, Washington, D.C., June 1976.

Limber, J. The genesis of complex sentences. In T.E. Moore (ed.), Cognitive development and the acquisition of language, N.Y.: Academic Press, 1973.

Slobin, D. Cognitive prerequisites for the acquisition of grammar. In C.A. Ferguson and D.I. Slobin (eds.), Studies of child language development, N.Y.: Holt, Rinehart, and Winston, 1973.

Werner, H. and Kaplan, B. Symbol formation. N.Y.: John Wiley and Sons, 1963.